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IN THE US PATENT AND TRADEMARK OFFICE

November 18, 2004

Applicants: Andreas Hajek et al.

Title : Moulding Composition For The Production
Of Sanitary-Ware Components

Serial No.: 09/664 241

Group: 1713

Filed : September 18, 2000

Examiner: Egwim

Confirmation No. 4110

Mail Stop Appeal Brief-Patents

Commissioner for Patents

P.O. Box 1450

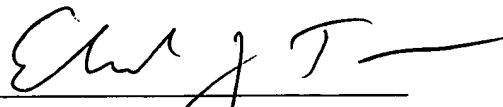
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING

Dear Sir:

I hereby certify that the correspondence set forth below is being deposited with the United States Postal Service under 37 CFR 1.8 as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on November 18, 2004.

Respectfully submitted,


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correspondence - Appellant's Reply To The Examiner's Answer
in triplicate
Postal Card



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APPELLANT'S REPLY TO THE EXAMINER'S ANSWER

Dear Sir:

Appellants reply to the Examiner's Answer of October 19, 2004, as follows with respect to certain paragraphs thereof:

Paragraph (5) Summary Of The Invention:

On page 2, second paragraph of paragraph (5) of the Answer, the Examiner incorrectly summarizes the invention of claim 1 in setting forth that the elastomer particles or elastomer particle aggregates have particle sizes smaller than 100 pm. Instead, claim 1 recites elastomer particles or elastomer particle aggregates having a particle size smaller than 100 μm (microns).

Moreover, the Examiner overly simplifies what is a complex subject matter relative to manufacture of improved scratch resistant sanitary-ware components. To this end, claim 1 recites a sanitary-ware moulding composition having, in combination with the recited inorganic filler in the syrup, elastomer particles or elastomer particle aggregates having a particle size smaller than 100 μm in an amount in the range of 5% by weight to less than 20% by weight, expressed in terms of the mass of the syrup, effective to impart to a sanitary-ware component molded from the moulding composition improved resistance to scratching as compared to a sanitary-ware component molded from a similar moulding composition devoid of the elastomer particles or elastomer particle aggregates.

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Paragraph (10) Grounds Of Rejection:

On page 4, line 6 of the Answer, the Examiner incorrectly states that the Kreig et al. reference discloses solid particulate polymers (PP) having particle sizes especially ranging from 0.13 to 0.15 mm. This is in error. The particulate polymers (PP) are said on page 12 of the English translation of the reference to be especially in a size range from 0.03 to 0.15 mm.

On page 4, first full paragraph (lines 7-11) of the Answer, the Examiner states that the Fink DE 2135828 reference teaches the solid particulate polymer particles (PP) to have glass transition temperatures below 35 degrees C, suggesting that they are elastomeric. This is believed to be incorrect. In particular, Appellants would point out that glass transition temperatures below 35 degrees C do not suggest at all that the material is an elastomeric material. As an illustrative example, high density polyethylene (HDPE) has a glass transition temperature of -110 degrees C and is a sort of rigid polymer at room temperature. This polymer is used to manufacture fuel tanks for automobiles, for example. Appellants believe the Examiner's statement that glass transition temperatures below 35 degrees C suggest the materials are elastomeric is not well-founded and amounts to speculation on the Examiner's part.

Upon reviewing the Fink DE 2135828 reference, Appellants would point out that the reference describes a soft material, which may even be so soft as to be sticky. However, soft materials are not necessarily elastomeric materials. At page 7, paragraph 2 of the German text (column 4, lines 7-15 of corresponding Fink et al. US Patent 3,870,557), it is pointed out that, should the glass transition temperature be higher than the desired 35 degrees C, the polymers may be adjusted in their softness by adding a so-called "external plasticizer" such as a phthalic acid ester. It is clear that an external plasticizer such as phthalic acid ester does not change the character of a rigid polymer to an elastomer, but will merely soften the rigid plastic to a softer plastic material.

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On page 5, second full paragraph (lines 9-13) of the Answer, the Examiner argues that the Hwa et al. '994 patent allegedly suggests to include elastomer particles or elastomer particle aggregates in the syrup of the Kreig et al. '539 document to improve impact strength.

Appellants believe this proposed combination of the '994 patent and the '539 document is incorrect. In particular, the '539 document itself does not teach any deficiency in impact strength of the molded article produced by practice of that patent. The examiner appears to find such a deficiency based on a hindsight analysis of Appellants' claims when no such deficiency exists within the four corners of the '539 patent. There is utterly no motivation in the '539 document to include elastomer particles or elastomer particle aggregates to improve impact strength of a molded article as alleged by the examiner based on his hindsight analysis.

Moreover, the '994 patent fails to support the combination proposed by the examiner. Firstly, the '994 patent does not teach inclusion of inorganic filler particles together with elastomer particles or elastomer particle aggregates in a sanitary-ware moulding composition. Secondly, there is no teaching in the '994 patent that the particles described in that patent can be included in any polymeric system whatsoever, much less a sanitary-ware moulding composition, without adversely affecting the properties of the moulding composition or the molded articles made from the moulding composition. For example, the '994 patent teaches that inclusion of rubber particles adversely affects other material properties such as tensile strength, clarity, heat distortion temperature, hardness, and aging stability.

The '539 document and the '994 patent thus do not support and actually teach away from the combination proposed by the examiner in the Section 103(a) rejection. The incorrectness of the proposed combination is evidenced by the fact that the '539 document fails

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to provide any teaching to include particles of the type described in the '994 patent even though the '994 patent was granted in 1972 long before the filing date of the '539 document.

Moreover, column 1, lines 30-34 of the cited '994 patent argues against including rubber particles to beneficially affect properties other than impact strength such that the examiner's proposed combination conflicts with the '994 patent itself. Appellants' claimed result flies in the face of logic wherein one skilled in the art would logically think that relatively hard inorganic filler particles, rather than relatively soft elastomeric particles or elastomer particle aggregates, should be included to improve scratch resistance. Appellants claim a sanitary-ware moulding composition that is formulated to achieve improved resistance to scratching of the molded sanitary-ware component with impact strength being a consideration for reducing the wall thickness of mouldings if desired.

The examiner's proposed use of the multi-graft copolymer particles of the '994 patent in the '539 document based on a reasonable expectation of success is an incorrect basis for combining the references since the '994 patent does not relate to a sanitary-ware moulding composition and since neither the cited '539 document nor the '994 patent discloses or suggests the combination of inorganic filler and elastomer particles or elastomer particle aggregates in a methyl-methacrylate-based syrup and achievement of Appellants' improved scratch resistance of a sanitary-ware component molded of Appellants' claimed sanitary-ware moulding composition.

These same conclusions apply with equal force to the Section 103 rejection based on the Kreig et al. '539 reference taken with the Henton et al. '529 patent or the Henton '450 reference and the Section 103 rejection based on the Kreig et al. '539 reference taken with the Alsmarraie et al. '662 patent.

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Paragraph (11) Response To Arguments:

On page 8, lines 1-14 of the Answer, the Examiner incorrectly argues that there are only two choices for the solid particulate polymers (PP) of the Kreig et al. '539 reference that incorporates the Fink DE 2135828 reference.

This is believed to be an improper representation of the situation presented to a person of ordinary skill in the art reading the Kreig et al. '539 reference. In particular, firstly, plastic materials are not divided into elastomeric and non-elastomeric materials. Instead, plastic materials comprise thermoplastic, elastomeric, and thermoset plastic material. All of these different general types of plastic materials encompass uncountable types of plastic materials which have widely varying physical and mechanical properties.

The simplistic approach by the Examiner in arguing that there are only two choices (elastomeric and non-elastomeric) for the solid particulate polymers (PP) evidences a failure to understand the disclosure of the Kreig et al. '539 reference and the subject matter of Appellants' claims and smacks of a hindsight analysis to support the obviousness rejection of Appellants' claims. As noted above, the Fink DE 2135828 reference does not point to elastomeric materials but merely to soft plastic material as expressly stated in that reference. Thus, even when the Fink DE 2135828 reference is incorporated by reference in the Kreig et al. '539 reference, the teaching of the Kreig et al. reference still remains the same and does not suggest to one skilled in the art to select elastomer particles or elastomer particle aggregates for incorporation into the curable mass of the Kreig et al. reference.

Finally, on page 9, first full paragraph of the Answer, the Examiner replies to Appellants' argument that the Section 103 rejections of the claims are based on improper hindsight analysis.

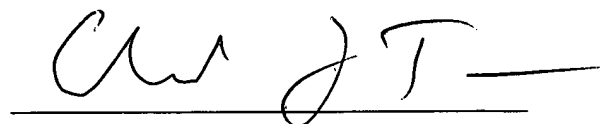
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Appellants believe the Examiner continues to demonstrate an improper hindsight analysis of Appellants' claims. The Examiner fails to address the question as to whether or not a person of ordinary skill in the art at the point in time when the invention was made would have selected elastomeric particles or elastomer particle aggregates to improve scratch resistance of the curable mass disclosed in Kreig et al. '529 reference.

Appellants believe the answer to the question is clearly no. As pointed out above, the impact strength of the curable mass of the Kreig et al. reference is of no concern to a person of ordinary skill in the art since the reference itself does not teach any deficiency in impact strength of the molded article produced by practice of that patent. The examiner appears to find such a deficiency based on a hindsight analysis of Applicants' claims when no such deficiency exists within the four corners of the '539 patent. Moreover, there is utterly no motivation in the '539 document to include elastomer particles or elastomer particle aggregates to improve resistance to scratching of a sanitary-ware component molded therefrom. The same is true of all of the secondary references cited by the examiner as well.

Respectfully submitted,

IN TRIPLICATE

A handwritten signature in dark ink, appearing to read 'Edward J. Timmer', is written over a horizontal line.

Edward J. Timmer Reg. No. 24 702

Encl. Postal Card